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EXAMINER	
LEE, CHRISTOPHER E	
ART UNIT	**PAPER NUMBER**
2112	17

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/540,676	CLINE, LESLIE E.	
	Examiner	Art Unit	
	Christopher E. Lee	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5,7-15 and 17-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,7-15 and 17-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Receipt Acknowledgement

1. Receipt is acknowledged of the Amendment filed on 12th of December 2003. Claims 1, 8, 10-13, 15 and 19 have been amended; no claim has been canceled; and no claim has been newly added since the last Office Action was mailed on 14th of August 2003. Currently, claims 1, 3-5, 7-15 and 17-21 are pending in this application.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 3-5, 7-11, 15 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. [US 6,131,134; hereinafter Huang] in view of Rafferty et al. [US 6,141,719 A; hereinafter Rafferty] and Pollard et al. [US 5,754,870 A; hereinafter Pollard].

Referring to claim 1, Huang discloses a method, comprising: providing a first resistor (pull-up resistor 340 of Fig. 3) with a first end (i.e., the end coupled to switch 330 in Fig. 3) and a second end (i.e., the end coupled to D+ in Fig. 3), said first end coupled to a switch (i.e., switch 330 of Fig. 3) and said second end coupled to a serial data bus wire (i.e., USB interface D+ of Fig. 3) at a near end of a serial data bus (i.e., detach control signal wire from converting circuit 310 to switch 330 and data lines D+ and D-, which are located within USB converter 120 in Fig. 3); controlling (i.e., opening or closing) said switch with a detach control signal (i.e., switch controlling signal from converting circuit 310 to switch 330 in Fig. 3) sent on a detach control signal wire (i.e., detach control signal wire) separate from data transmission wires (i.e., data lines D+ and D-) of said serial data bus (i.e., detach control signal wire and data lines D+, D-) to cause an apparatus (i.e., USB converter 120 of Fig. 3) containing said first resistor (i.e., resistor 340 of Fig. 3) and said switch (i.e., switch 330 of Fig. 3) to enter a logically detached state (See col. 6, lines 27-30 and 50-67; i.e., in fact, even if said apparatus is physically connected (i.e.,

physically attached), the open switch (e.g., no voltage is supplied to D+) makes said apparatus set said logically detached state); and switching (i.e., open or close said switch in Fig. 3) a biasing voltage (i.e., 3.3V in Fig. 3) from said resistor (i.e., resistor 340 of Fig. 3) utilizing said switch (i.e., switch 330 of Fig. 3).

Huang does not teach said logically detaching control signal (e.g., switch controlling signal for simulating removal of USB device) sent from a far end of said serial data bus.

Rafferty discloses a USB selector switch, wherein a logically detaching control signal (e.g., switch controlling signal for simulating removal of USB device; See Fig. 4 and col. 3, lines 13-29) is sent from a far end (i.e., from a corresponding peripheral module; See col. 3, lines 26-28) of a serial data bus (i.e., bus 14 of Fig. 3; See col. 2, lines 43-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have received a logically detaching control signal from a far end of a serial data bus, as disclosed by Rafferty, in said apparatus, as disclosed by Huang, for the advantage of simulating insertion and removal (i.e., logically attaching and detaching) of said apparatus (i.e., USB device) by a corresponding far end device (i.e., a corresponding peripheral device; See Rafferty, col. 1, lines 50-58).

Huang, as modified by Rafferty, does not teach influencing said detach control signal with a wake-up signal sent on a wake-up signal wire separate from said data transmission wires of said serial data bus from said near end of said serial data bus to said far end of said serial data bus.

Pollard discloses a power management of a computer plug-in card having a remote data link 20 (Fig. 2), wherein influencing a detach control signal (i.e., command output 52 of Fig. 2) with a wake-up signal (i.e., 'link operable' signal 58 in Fig. 2) sent on a wake-up signal wire (i.e., status signal line 62 of Fig. 2) separate from a data transmission wires of a data bus (i.e., data bus with power source line 36 through connectors 26, 28 in Fig. 2) from a near end of said data bus (i.e., side of switch 46 in Fig. 2) to a far end of said data bus (i.e., side of host computer in Fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said wake-up signal wire, as disclosed by Pollard, in said apparatus, as disclosed by Huang, as modified by Rafferty, so as said switch (i.e., power connect switch) to operate responsive to said wake-up signal (i.e., status signal) indicating the operability of said near end of said data bus (i.e., a status monitor indicative of the operability of the remote data link capability) from said near end (i.e., power-consuming elements on the card) to said far end (i.e., power source in the computer), which is disclosed at Pollard, col. 2, lines 43-48.

Huang, as modified by Rafferty and Pollard, teaches said method step of influencing said detach control signal (i.e., switch controlling signal from converting circuit 310 to switch 330 in Fig. 3; Huang) with said wake-up signal (i.e., 'link operable' signal 58 in Fig. 2; Pollard) sent on said wake-up signal wire (i.e., status signal line 62 of Fig. 2; Pollard) separate from said data transmission wires (i.e., data lines D+ and D- in Fig. 3; Huang) of said serial data bus (i.e., USB in Fig. 3; Huang) from said near end of said serial data bus (i.e., a side of switch) to said far end of said serial data bus (i.e., the other side of switch).

Referring to claim 3, Huang discloses said first resistor is configured as a pull-up resistor (pull-up resistor 340 of Fig. 3).

Referring to claim 4, Huang discloses detecting said switching of said biasing voltage (See col. 6, lines 30-35).

Referring to claim 5, Huang discloses determining a logically detached state responsive to said detecting (See col. 6, lines 28-30).

Referring to claim 8, Huang discloses an apparatus (i.e., USB converter 120 of Fig. 3), comprising: a first resistor with a first end and a second end (i.e., pull-up resistor 340 of Fig. 3); a switch (i.e., switch 330 of Fig. 3) coupled to said first end of said first resistor and a bias voltage (i.e., 3.3V in Fig. 3); a detach control signal wire (i.e., switch controlling signal arrow from converting circuit 310 to switch 330 in Fig. 3) separate from data transmission wires (i.e., data lines D+ and D-) of said serial data

bus (i.e., detach control signal wire and data lines D+, D-) coupled to said switch at a near end of a serial data bus (i.e., detach control signal wire from converting circuit 310 to switch 330 and data lines D+ and D-, which are located within USB converter 120 in Fig. 3), to receive a detach control signal (i.e., switch controlling signal from converting circuit 310 to switch 330 in Fig. 3) to cause said apparatus (i.e., USB converter) to enter a logically detached state (See col. 6, lines 27-30 and 50-67; i.e., in fact, even if said apparatus is physically connected (i.e., physically attached), the open switch (i.e., no voltage is supplied to D+) makes said apparatus set said logically detached state); and a serial data bus wire (i.e., USB interface D+ of Fig. 3) of said serial data bus coupled to said second end of said first resistor (See Fig. 3). Huang does not teach said logically detaching control signal (e.g., switch controlling signal for simulating removal of USB device) sent from a far end of said serial data bus.

Rafferty discloses a USB selector switch, wherein a logically detaching control signal (e.g., switch controlling signal for simulating removal of USB device; See Fig. 4 and col. 3, lines 13-29) is sent from a far end (i.e., from a corresponding peripheral module; See col. 3, lines 26-28) of a serial data bus (i.e., bus 14 of Fig. 3; See col. 2, lines 43-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have received a logically detaching control signal from a far end of a serial data bus, as disclosed by Rafferty, in said apparatus, as disclosed by Huang, for the advantage of simulating insertion and removal (i.e., logically attaching and detaching) of said apparatus (i.e., USB device) by a corresponding far end device (i.e., a corresponding peripheral device; See Rafferty, col. 1, lines 50-58).

Huang, as modified by Rafferty, does not teach a wake-up signal wire separate from said data transmission wires of said serial data bus to send a wake-up signal from said near end of said serial data bus to said far end of said serial data bus to influence said detach control signal.

Pollard discloses a power management of a computer plug-in card having a remote data link 20 (Fig. 2), wherein a wake-up signal wire (i.e., status signal line 62 of Fig. 2) separate from a data transmission wires

of a data bus (i.e., data bus with power source line 36 through connectors 26, 28 in Fig. 2) to send a wake-up signal (i.e., 'link operable' signal 58 in Fig. 2) from a near end of said data bus (i.e., side of switch 46 in Fig. 2) to a far end of said data bus (i.e., side of host computer in Fig. 2) to influence a detach control signal (i.e., command output 52 of Fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said wake-up signal wire, as disclosed by Pollard, in said apparatus, as disclosed by Huang, as modified by Rafferty, so as said switch (i.e., power connect switch) to operate responsive to said wake-up signal (i.e., status signal) indicating the operability of said near end of said data bus (i.e., a status monitor indicative of the operability of the remote data link capability) from said near end (i.e., power-consuming elements on the card) to said far end (i.e., power source in the computer), which is disclosed at Pollard, col. 2, lines 43-48.

Huang, as modified by Rafferty and Pollard, teaches said method step of influencing said detach control signal (i.e., switch controlling signal from converting circuit 310 to switch 330 in Fig. 3; Huang) with said wake-up signal (i.e., 'link operable' signal 58 in Fig. 2; Pollard) sent on said wake-up signal wire (i.e., status signal line 62 of Fig. 2; Pollard) separate from said data transmission wires (i.e., data lines D+ and D- in Fig. 3; Huang) of said serial data bus (i.e., USB in Fig. 3; Huang) from said near end of said serial data bus (i.e., a side of switch) to said far end of said serial data bus (i.e., the other side of switch).

Referring to claim 9, Huang discloses said switch may apply said bias voltage to said first end of said first resistor responsively to a detach control signal (i.e., switch controlling signal from converting circuit 310 in Fig. 3) on said detach control signal wire (See col.6, lines 23-27).

Referring to claim 11, Huang discloses said serial data bus carries universal serial bus data (i.e., USB interface D+ of Fig. 3).

Referring to claim 15, Huang discloses an apparatus (i.e., USB converter 120 of Fig. 3), comprising: means for providing a first resistor with a first end and a second end (i.e., pull-up resistor 340

of Fig. 3) coupled to a switch (i.e., switch 330 of Fig. 3) and said second end coupled to a serial data bus wire (i.e., USB interface D+ of Fig. 3) at a near end of a serial data bus (i.e., detach control signal wire from converting circuit 310 to switch 330 and data lines D+ and D-, which are located within USB converter 120 in Fig. 3); means for controlling said switch with a detach control signal (i.e., switch controlling signal from converting circuit 310 in Fig. 3) on a detach control signal wire (i.e., detach control signal wire) separate from data transmission wires (i.e., data lines D+ and D-) of said serial data bus (i.e., detach control signal wire and data lines D+, D-) to cause said apparatus (USB converter 120 of Fig. 3) to enter a logically detached state (See col. 6, lines 27-30 and 50-67; i.e., in fact, even if said apparatus is physically connected (i.e., physically attached), the open switch (e.g., no voltage is supplied to D+) makes said apparatus set said logically detached state); and means for switching a biasing voltage from said resistor utilizing said switch (See col. 6, lines 23-27).

Huang does not teach said logically detaching control signal (e.g., switch controlling signal for simulating removal of USB device) sent from a far end of said serial data bus.

Rafferty discloses a USB selector switch, wherein a logically detaching control signal (e.g., switch controlling signal for simulating removal of USB device; See Fig. 4 and col. 3, lines 13-29) is sent from a far end (i.e., from a corresponding peripheral module; See col. 3, lines 26-28) of a serial data bus (i.e., bus 14 of Fig. 3; See col. 2, lines 43-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have received a logically detaching control signal from a far end of a serial data bus, as disclosed by Rafferty, in said apparatus, as disclosed by Huang, for the advantage of simulating insertion and removal (i.e., logically attaching and detaching) of said apparatus (i.e., USB device) by a corresponding far end device (i.e., a corresponding peripheral device; See Rafferty, col. 1, lines 50-58).

Huang, as modified by Rafferty, does not teach means for influencing said detach control signal with a wake-up signal sent on a wake-up signal wire separate from said data transmission wires of said serial data bus from said near end of said serial data bus to said far end of said serial data bus.

Pollard discloses a power management of a computer plug-in card having a remote data link 20 (Fig. 2), wherein means for influencing a detach control signal (i.e., command output 52 of Fig. 2) with a wake-up signal (i.e., 'link operable' signal 58 in Fig. 2) sent on a wake-up signal wire (i.e., status signal line 62 of Fig. 2) separate from a data transmission wires of a data bus (i.e., data bus with power source line 36 through connectors 26, 28 in Fig. 2) from a near end of said data bus (i.e., side of switch 46 in Fig. 2) to a far end of said data bus (i.e., side of host computer in Fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said wake-up signal wire, as disclosed by Pollard, in said apparatus, as disclosed by Huang, as modified by Rafferty, so as said switch (i.e., power connect switch) to operate responsive to said wake-up signal (i.e., status signal) indicating the operability of said near end of said data bus (i.e., a status monitor indicative of the operability of the remote data link capability) from said near end (i.e., power-consuming elements on the card) to said far end (i.e., power source in the computer), which is disclosed at Pollard, col. 2, lines 43-48.

Huang, as modified by Rafferty and Pollard, teaches said method step of influencing said detach control signal (i.e., switch controlling signal from converting circuit 310 to switch 330 in Fig. 3; Huang) with said wake-up signal (i.e., 'link operable' signal 58 in Fig. 2; Pollard) sent on said wake-up signal wire (i.e., status signal line 62 of Fig. 2; Pollard) separate from said data transmission wires (i.e., data lines D+ and D- in Fig. 3; Huang) of said serial data bus (i.e., USB in Fig. 3; Huang) from said near end of said serial data bus (i.e., a side of switch) to said far end of said serial data bus (i.e., the other side of switch).

Referring to claim 17, Huang discloses said apparatus of claim 15, further comprising means for detecting said switching of said biasing voltage (See col. 6, lines 30-35).

Referring to claim 19, Huang discloses a system, comprising: a serial data bus (i.e., USB interface in Fig. 1 and 2) with a near end (i.e., side of USB converter 120 in Fig. 1) and a far end (i.e., side of computer system 110 in Fig. 1); a first circuit (i.e., USB converter 120 of Fig. 1), coupled to said near end (See Fig. 1), including a first resistor with a first end and a second end (i.e., pull-up resistor 340 of Fig. 3), a switch (i.e., switch 330 of Fig. 3) coupled to said first end of said first resistor and to a bias voltage (i.e., 3.3V in Fig. 3), a serial data bus wire (i.e., USB interface D+ of Fig. 3) of said serial data bus coupled to said second end of said first resistor (See Fig. 3), a detach control signal wire (i.e., switch controlling signal arrow from converting circuit 310 to switch 330 in Fig. 3) separate from data transmission wires (i.e., data lines D+ and D-) of said serial data bus (i.e., detach control signal wire and data lines D+, D-) coupled to said switch to receive a detach control signal (i.e., switch controlling signal) to cause said first circuit (i.e., USB converter) to enter a logically detached state (See col. 6, lines 27-30 and 50-67; i.e., in fact, even if said apparatus is physically connected (i.e., physically attached), the open switch (i.e., no voltage is supplied to D+) makes said first circuit set said logically detached state); and a second circuit (computer system 110 of Fig. 1), coupled to said far end (See Fig. 1).

Huang does not teach said logically detaching control signal (e.g., switch controlling signal for simulating removal of USB device) sent from a far end of said serial data bus to said near end of said serial data bus.

Rafferty discloses a USB selector switch, wherein a logically detaching control signal (e.g., switch controlling signal for simulating removal of USB device; See Fig. 4 and col. 3, lines 13-29) is sent from a far end (i.e., from a corresponding peripheral module) of a serial data bus (i.e., bus 14 of Fig. 3; See col. 2, lines 43-45) to a near end (i.e., downstream module 16 of Fig. 4) of said serial data bus (See col. 3, lines 26-28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have received a logically detaching control signal from a far end of a serial data bus, as disclosed by Rafferty, in said first circuit, as disclosed by Huang, for the advantage of simulating insertion and

removal (i.e., logically attaching and detaching) of said apparatus (i.e., USB device) by a corresponding far end device (i.e., a corresponding peripheral device; See Rafferty, col. 1, lines 50-58).

Huang, as modified by Rafferty, does not teach a wake-up control signal wire separate from said data transmission wires of said serial data bus to send a wake-up signal from said near end of said serial data bus to said far end of said serial data bus; and said second circuit to send said detach control signal responsive to said wake-up signal.

Pollard discloses a power management of a computer plug-in card having a remote data link 20 (Fig. 2), wherein a wake-up control signal wire (i.e., status signal line 62 of Fig. 2) separate from a data transmission wires of a data bus (i.e., data bus with power source line 36 through connectors 26, 28 in Fig. 2) to send a wake-up signal (i.e., 'link operable' signal 58 in Fig. 2) from a near end of said data bus (i.e., side of switch 46 in Fig. 2) to a far end of said data bus (i.e., side of host computer in Fig. 2); and a second circuit (i.e., power source 24 in the computer of Fig. 2) to send a detach control signal (i.e., command output 52 of Fig. 2) responsive to said wake-up signal (i.e., 'link operable' signal from plug-in card 30 of Fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said wake-up signal wire, as disclosed by Pollard, in said apparatus, as disclosed by Huang, as modified by Rafferty, so as said switch (i.e., power connect switch) to operate responsive to said wake-up signal (i.e., status signal) indicating the operability of said near end of said data bus (i.e., a status monitor indicative of the operability of the remote data link capability) from said near end (i.e., power-consuming elements on the card) to said far end (i.e., power source in the computer), which is disclosed at Pollard, col. 2, lines 43-48.

Huang, as modified by Rafferty and Pollard, teaches said method step of influencing said detach control signal (i.e., switch controlling signal from converting circuit 310 to switch 330 in Fig. 3; Huang) with said wake-up signal (i.e., 'link operable' signal 58 in Fig. 2; Pollard) sent on said wake-up signal wire (i.e.,

status signal line 62 of Fig. 2; Pollard) separate from said data transmission wires (i.e., data lines D+ and D- in Fig. 3; Huang) of said serial data bus (i.e., USB in Fig. 3; Huang) from said near end of said serial data bus (i.e., a side of switch) to said far end of said serial data bus (i.e., the other side of switch).

Referring to claim 20, Huang discloses said switch (switch 330 of Fig. 3) may apply said bias voltage (3.3V in Fig. 3) to said first end of said first resistor responsively to said detach control signal (switch controlling signal from converting circuit 310 in Fig. 3). Refer to col.6, lines 23-27.

Referring to claims 7, 10, 18 and 21, Huang discloses said detach control signal (i.e., switch controlling signal) is asserted (i.e., state of switch controlling signal which causes switch 330 to be closed) when said wake-up signal (i.e., converted signal from the signals transferred between non-PnP interface and USB interface) is de-asserted (i.e., state of the converted signal which ultimately causes switch 330 to be closed).

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang [US 6,131,134] in view of Rafferty [US 6,141,719 A] and Pollard [US 5,754,870 A] as applied to claims 1, 3-5, 7-11, 15 and 17-21 above, and further in view of Decuir [US 5,781,028].

Referring to claim 12, Huang, as modified by Rafferty and Pollard, discloses all the limitations of claim 12 except that does not teach said serial data bus carries IEEE-1394 bus data.
Decuir teaches a conventional bi-directional transmission line using an IEEE 1394 standard (Fig. 4), wherein said serial data bus (i.e., transmission line 51 of Fig. 4) carries IEEE-1394 bus data (See col. 2, lines 23-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied said serial data bus wire, as disclosed by Decuir, to said serial data bus wire of said apparatus, as disclosed by Huang, as modified by Rafferty and Pollard, for the advantage of a high speed of data transmission, which is well know to one of ordinary skill in the art at the time the invention was made.

5. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang [US 6,131,134] in view of Rafferty [US 6,141,719 A] and Pollard [US 5,754,870 A] as applied to claim 1, 3-5, 7-11, 15 and 17-21 above, and further in view of Takasu [JP 407058800 A].

Referring to claim 13, Huang, as modified by Rafferty and Pollard, discloses all the limitations of claim 13 except that does not teach a second resistor with a first end and a second end.
Takasu teaches a second resistor (i.e., terminating register R_2 of Fig. 1) with a first end and a second end, said first end coupled to said serial data bus wire (i.e., transmission line 9 of Fig. 1).
Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said second resistor, as disclosed by Takasu, in said apparatus, as disclosed by Huang, as modified by Rafferty and Pollard, so as to provide effective termination on said bus, which is well know to one of ordinary skill in the art at the time the invention was made.

Referring to claim 14, Takasu discloses said second end of said second resistor is coupled to signal ground (i.e., R_2 of Fig. 1 as a pull-down resistor; See col. 4, lines 30-31).

Response to Arguments

6. Applicant's arguments filed on 12th of December 2003 have been fully considered but they are not persuasive.

7. *In response to the Applicant's argument that* the secondary reference Pollard does not disclose the subject matter "serial data bus", which has been taught by the primary references Huang and Rafferty, it has been held that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references, but simply what the combination of references makes obviousness to one of ordinary skill in the pertinent art. See *In re Bozek*, 163 USPQ 545 (CCPA 1969). In other words, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this

case, the Examiner has clearly pointed out rationale for appropriate combination of the references Huang, Rafferty and Pollard, and it shows the obviousness of the claimed invention including the above argued element. Thus, the Applicant's argument on this point is not persuasive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher E. Lee whose telephone number is 703-305-5950. The examiner can normally be reached on 9:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Christopher E. Lee
Examiner
Art Unit 2112

cel/

MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100